

REMARKS

Claims 1-20 are pending. Claims 1, 5, 10-14, and 16-20 stand rejected under 35 USC § 102 (b) as being anticipated by Chalfant. Claims 2,3, and 6 stand rejected under 35 USC § 103(a) as being unpatentable over Chalfant taken together with McAfferty et al. Claim 4, 7, 8, and 15, stand objected to as being dependent upon a rejected claim, but would be allowable if rewritten in independent form.

The Office Action noted that Chalfant failed to teach the presence of a spine. This is the common element present in each of the objected claims 4, 7, 8 and 15.

Claim 1 has been amended to require the presence of a spine. Chalfant neither discloses nor suggests the usual presence of a spine. Nor would one of ordinary skill in the art have been motivated to employ a spine in a smoke stack structure of Chalfant. Accordingly, it is submitted that claims 1-20 as presently amended are novel and unobvious over Chalfant.

Claims 21-44 are newly submitted claims. Claim 21-39 are identical in all respects of the originally submitted claims 1-20, except that the piping elbow is further clarified as one being an *enclosed* elbow having an internal wall. This stands in contrast to the structure in Chalfant in which the smoke stack walls are lined with slits and are therefore not enclosed. The smoke stack itself is enclosed by a casing. However, it is the smoke stack which forms the elbow containing the flow of smoke and the deflector plates. In the Chalfant structure, it is necessary to have slits in the smoke stack to allow the cinders to flow out and away from the elbow space through the slits into another chamber called the casing in which the cinders can collect into an ash pan or a fire box. One of ordinary skill in the art would not have been motivated to enclose the smoke stack elbow of Chalfant because the slits are critical to collect the solids particular matter from smoke stream. In the structure of the invention, however, the liquid collected does not exit from the elbow section. Accordingly, it is submitted that claims 21-39 are both novel and unobvious over Chalfant and McAfferty et al.

Claims 40-44 are also newly added. These claims are directed to a process for separating liquid droplets from a liquid containing gas in which the liquid is collected in

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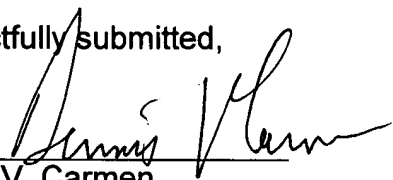
the fluid collecting lip located at the bottom of vanes within the elbow. Chalfant does not disclose the presence of vanes having fluid collection lips located at the bottom of the vanes. The deflector plates in Chalfant are formed by cutting the side and the bottom of the internal wall of the smoke stack and bending the metal inwardly within the smoke stack chamber. The purpose of the deflector plate is to redirect the upward flow of solid particulates in the smoke by impinging on a deflector plate and redirecting the upward flow out through the slit openings into the casing. One of ordinary skill in the art would not have been motivated to provide a fluid collecting lip at the bottom of the deflector plate, which in any case is not a vane, nor to substitute deflector plates for vanes having fluid collecting lips because the purpose of the deflector plate is not to collect fluid, but rather to redirect the smoke path containing solid particulates into a casing.

Accordingly, it is submitted that the claims as amended and the newly added claims as presented are novel and unobvious over Chalfant taken alone or Chalfant in combination with McAferty et al.

The Examiner is invited to contact the undersigned with any questions related to the further prosecution of this application at the number below.

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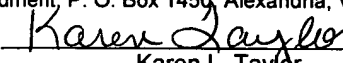
Respectfully submitted,


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May 26, 2005
Date

CERTIFICATE OF MAILING UNDER 37 CFR 1.8(a)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Mail Stop Amendment, P. O. Box 1450, Alexandria, VA 22313-1450.


Karen L. Taylor

5/26/05
Date